

Weekly Report

12/21/2014-12/28/2014

Reserach

I have watched the video of Wang Pu's report and read two papers related which contain a lot of definition[1][2]. Authors put forward the transient origin destination matrix to capture road usage which requires mobile data, population distribution and daily distribution of traffic volume.

$$t - OD_{ij} = W * \frac{F_{ij}^{vehicle}}{\sum_{ij}^A F_{ij}^{all}}$$

$t - OD_{ij}$ describe the travel demands of people in zone A driving from zone i to zone j. It is reasonable to define people nearby into a same activity patten. I think it will be better if the size of a zone is as small as a community. Also, Its a great ideal to find the driver source with additional travel time who contribute most to congestion. Furthermore, we can capture the pattern of these driver source in different period(i.e.. morning period).

Plan for next week

- Read papers about taxi gps data and mobile data visualization .

References

- [1] Junjie Wang, Dong Wei, Kun He, Hang Gong, and Pu Wang. Encapsulating urban traffic rhythms into road networks. *Scientific reports*, 4, 2014.

- [2] Pu Wang, Timothy Hunter, Alexandre M Bayen, Katja Schechtner, and Marta C González. Understanding road usage patterns in urban areas. *Scientific reports*, 2, 2012.